

3 Kyushu Electric Power Group's Environmental Accounting

Kyushu Electric Power introduced environmental accounting in Fiscal 2000 and has published it in its Environment Action Report ever since. The Kyushu Electric Power Group also is working on environmental accounting in Fiscal 2003. The group compiles the Kyushu Electric Power Group's Environmental Accounting Guideline based on the yardstick for calculating environmental activity costs that Kyushu Electric Power uses, and calculates the overall costs and effects of its environmental activities. The listed costs are those involved in environmental conservation for Fiscal 2002 that each group company could compute as a trial calculation. The group will further discuss its accounting system including how to raise its accuracy and factor in its effects.

◇Data from

27 group companies

4 Grasping Achieved Reduction of Environmental Loads

The group also has worked on grasping how much it succeeded in reducing environmental loads through its energy saving and recycling efforts. It established a data processing method in Fiscal 2002 to understand how much environmental load reduction can be achieved. Each group company sets out its own targets selected from the unified targets that it considers possible to achieve, working towards a reduction of environmental loads. As for substances subjected to environmental laws and regulations, the group continues to strive for appropriate operation and management based on the laws and regulations. It also discusses measures to reduce environmental loads.

◇Data from

27 group companies

■ Costs of Kyushu Electric Power Group's environmental activities (Fiscal 2002)

Activity areas		Main activities	Cost (million yen)	
			Investment	Expense
Global environmental preservation	Global warming prevention	Installation of power sources with low CO ₂ emissions, thermal efficiency improvement, introduction and support for new energy equipment, energy conservation (including low-emission vehicles) and SF ₆ emission control	255.5	6.8
	Ozone layer protection	Measures for Freon and Halon recovery	0.1	10.5
Local natural environment preservation	Air pollution prevention	Flue gas treatment (desulfurization, denitrification, particulate reduction equipment) and use of fuel with low sulfur content	0.9	80.0
	Water pollution prevention	Waste water treatment, measures against oil leaks	2.9	91.8
	Noise and vibration prevention	Measures against noise and vibration at facilities	0	0.9
Resource recycling	Industrial waste	Reduction and recycling of industrial waste	0	36.3
		Disposal of industrial waste, and PCB storage	22.0	91.3
	General waste	Reduction and recycling of general waste	0	13.9
		Disposal of general waste	0	63.9
Green procurement		Additional cost incurred by green procurement	0	0.2
Environmental activity management	Environmental activity organization	Expenses from environment-related license acquisition, education and training, and for personnel	0	47.5
	ISO and EMS application and maintenance	ISO14001 and EMS (ISO-based system) acquisition, application and maintenance	0	32.1
	Environmental load measurement and monitoring	Environmental impact assessment, monitoring and measurement of environmentally burdening substances, and PRTR measurements	0	10.6
Environment related research	Environmental preservation	Prevention of global warming, improvement of air and water quality and effective use of waste	0	40.5
Social activities	Greening of sites	Greening of company owned land and facilities, and its maintenance and management.	0	70.5
	Maintaining quality townscapes and surroundings	Measures to keep buildings in harmony with the landscape of their surrounding environment	0	0
	Environment Month	Environment month, planting activities, etc.	0	0.1
	Supporting local environmental activities	Support for local environmental activities and environmental organizations	0	0.7
	Environmental information disclosure	Making pamphlets and setting up a web-site related to the environment	0	0.1
Total			281.4	597.7

N.B. Data of some companies not included.

■ Kyushu Electric Power Group's environmental loads (Fiscal 2002)

Items		Unit	Actual amounts in FY2002
Power consumption at office		kWh	33,441,702
Power consumption at plants		kWh	401,800,232
Water consumption at offices		m ³	210,332
Industrial water consumption		m ³	491,755
Fuel consumption for heating		kl	64
Fuel consumption for vehicles		kl	2,476
Used paper	Amount used	ton	675
	Recycling rate	%	48
Copy paper	Amount used	piece	84,247,017
	Rate of recycled paper use	%	60
Toilet roll	Amount used	roll	134,968
	Rate of recycled paper use	%	86
Industrial waste	Amount	ton	40,203
	Recycling rate	%	73

N.B. Data of some companies not included

PRTR investigation results(Fiscal 2002)

(Unit: kg)

Index No.	Chemical substances	Application	Company	Amount handled	Amount released into the environment				Amount transferred
					Air	Water	Soil	Reclamation	
1	Water-soluble zinc compounds	Hot dip galvanizing	Nishi Nihon Denki Tekkou Co., Ltd.	1,280	72				88,995
40	Ethyl benzene	Coating	Kyushu Meter & Relay Engineering Corp.	1,453	1,453				
43	Ethylene glycol	Coolant	Nishinippon Environmental Energy Co., Inc.	6,263	6,263				
63	Xylene	Coating	Kyushu Meter & Relay Engineering Corp.	5,413	5,413				
			Kyuhen Co., Inc.	2,300	2,300				
227	Toluene	Coating	Kyushu Meter & Relay Engineering Corp.	5,698	5,698				
230	Lead and its compounds	Hot dip galvanizing	Nishi Nihon Denki Tekkou Co., Ltd.	4,480				46	27
		Soldering	Nishimu Electronics Industries Co., Ltd.	1,600					1,600

※Substances of which one ton or more were handled annually are listed above.

PCB storage (Fiscal 2002)

PCB held by the Kyushu Electric Power Group is shown below and kept at dedicated storehouses under strict surveillance. The group plans to render it harmless by the 2016 deadline, according to the law concerning special measures against PCB waste (effective July 2001).

Equipment using PCB	Amount	Management status	Companies possessing PCB
Transformer	46 units	46 units kept in strict security	Kyudenko Corporation, Tobata Co-operative Thermal Power Company, Inc., Oita Co-operative Thermal Power Company, Inc., DENKI BLDG. CO., LTD.
Capacitor	93 units	3 units in use, 90 units kept in strict security	Nishinippon Plant Engineering and Construction Co., Ltd., Kyuden Sangyo Co., Ltd., Kyudenko Corporation, Kyuki Corporation, Kyushu Meter & Relay Engineering Corp., Koyo Denki Kogyo Co., Ltd., Kyuhen Co., Inc., Kyushu Koatsu Concrete Industries Co., Ltd., Nishi Nihon Denki Tekkou Co., Ltd., Tobata Co-operative Thermal Power Company, Inc., Oita Co-operative Thermal Power Company, Inc., Nishimu Electronics Industries Co., Ltd., DENKI BLDG. CO., LTD., Kyushu Highlands Development Co., Ltd.
Stabilizer	493 units	All units kept in strict security	Kyuden Sangyo Co., Ltd., Kyudenko Corporation, Tobata Co-operative Thermal Power Company, Inc., Oita Co-operative Thermal Power Company, Inc., DENKI BLDG. CO., LTD.
Others	1 units, 369ℓ, 27kg	1 unit in use, all units kept in strict security	Kyuden Sangyo Co., Inc., Kyudenko Corporation, Oita Co-operative Thermal Power Company, Inc., DENKI BLDG. CO., LTD.

SOx and NOx emissions from power generating facilities (Fiscal 2002)

Name of companies and units	Installed capacity [MW]	Fuels used	Records		Agreement with local governments		
			SOx (ppm)	NOx (ppm)	SOx (ppm)	NOx (ppm)	
Tobata Co-operative Thermal Power Company, Inc.	Unit 2	156	Mostly LNG	Not measured because emissions are 10m ³ /h or less	89	18	93
	Unit 3	250			73	11	80
	Unit 4	375			17	19	19
Oita Co-operative Thermal Power Company, Inc.	Unit 1	253	Mostly byproduct gas	299	163	326	180
	Unit 2	253	Mostly byproduct gas	301	172		180

※The records are the maximum values for the year. ※The Air Pollution Control Law does not require measurement of SOx emissions of 10m³/h or less.

Freon and Halon emissions (Fiscal 2002)

Listed below are the amounts of Freons and Halons kept and consumed by the Kyushu Electric Power Group. The group ensures the recovery of these gases in repairing and inspecting equipment that uses them, thus minimizing their emissions into the air.

Type	Main use	Amount contained (ton)	Consumption (ton)	Companies handling them
Specific Freons	Air conditioning, refrigeration	4.3	0	Nishinippon Environmental Energy Co., Inc., DENKI BLDG. CO., LTD.
Alternative Freons	Air conditioning, refrigeration, parts cleaning	41.1	4.3	Kyudenko Corporation, Kyuki Corporation, Kyushu Meter & Relay Engineering Corp., Koyo Denki Kogyo Co., Ltd., Nishi Nihon Denki Tekkou Co., Ltd., Tobata Co-operative Thermal Power Company, Inc., Oita Co-operative Thermal Power Company, Inc., Oita Liquefied Natural Gas Co., Ltd., Nishinippon Environmental Energy Co., Inc., Kitakyushu Liquefied Natural Gas Co., Inc., Nishimu Electronics Industries Co., Ltd., DENKI BLDG. CO., LTD.
Halon	Fire fighting	5.1	0	Kyudenko Corporation, Kyuki Corporation, Tobata Co-operative Thermal Power Company, Inc., Oita Co-operative Thermal Power Company, Inc., Oita Liquefied Natural Gas Co., Ltd., Nishinippon Environmental Energy Co., Inc., Kitakyushu Liquefied Natural Gas Co., Inc., DENKI BLDG. CO., LTD.

※Specific Freons: CFC11 ※Alternative Freons: HCFC22, HCFC123, HCFC225 ※Halons: Halon 1211, Halon 1301